



FINAL PROGRAM

Global Annual Meet on

Mechanical and Aerospace Engineering

March 10-11, 2025 | Rome, Italy

Venue:

**Hotel American Palace
Via Laurentina, 554 00143, Roma, Italy**



09:00-09:15 Onsite Registrations and Badge Collection

09:15-09:30 Opening Remarks and Introduction

Plenary Session

Moderator: **Raffaele Capuano**, University of Naples Federico II, Italy

09:30-10:10 Title: Advances in Low Carbon Combustion - Ammonia and Hydrogen as the Future

Srinath Ekkad, North Carolina State University, USA

10:10-10:50 Title: Resonating Free Piston Generators and Their Optimal Control Running on Hydrogen.

Julian F. Dunne, University of Sussex, UK

10:50-11:05

Coffee Break

11:05-11:45 Title: Prediction of Long-Term Durability of Composites in Marine/Naval Applications

Vistasp M. Karbhari, The University of Texas at Arlington, USA

11:45-12:25 Title: A Nonlinear Approach in the Quantification of Numerical Uncertainty by High Order Methods for Compressible Turbulence with Shocks

H.C. Yee, NASA Ames Research Center, USA

12:25-13:05 Title: Elastic Wave-based Methods for Nondestructive Inspection and Condition Monitoring of Structural Components

Francesco Lanza Di Scalea, University of California San Diego, CA, USA

13:05-13:10

Group Photo

13:10-14:00

Lunch Break

Keynote Session

14:00-14:30 Title: Asymptotic Long-Wave Model for an Ultrathin Elastic Plate with Surface Energy Derived from 3D Elasticity Theory

Gennadi Mikhasev, Harbin Institute of Technology, China

14:30-15:00 Title: On a fictitious domain approach for the simulation of fluid-structure interaction problems

Daniele Boffi, KAUST, Saudi Arabia

15:00-15:30 Title: Web Crippling Investigation of Cold-Formed Stainless Steel Joist Beams with Perforations of Different Arrangements

Muditha Kulatunga, Glasgow Caledonian University, UK

Invited Session

15:30-15:55 Title: Thin-Walled Tubular Shells subjected to Large Displacements: A Geometrically Exact Theory of Warping

Christian Iandiorio, University of Rome Tor Vergata, Italy

15:55-16:10	Coffee Break
16:10-16:35	Title: Impact of Asymmetric Behavior on Frequency Response and Stability in Rate-Independent Hysteretic Systems Raffaele Capuano , University of Naples Federico II, Italy
16:35-17:00	Title: Recent Advancements in the Modeling of Mechanical Hysteresis Phenomena in Aerospace and Mechanical Engineering Nicolo Vaiana , University of Naples Federico II, Italy
17:00-17:25	Title: Experimental assessment of crack path in lightweight gears for fail safe design Andrea Mura , Polytechnic University of Turin, Italy
End of Day-1	

DAY 2

March 11, 2025 | Rome, Italy
Meeting Room: NEW YORK

Plenary Session	
Moderator: Yin Zhiping , Northwestern Polytechnical University, China	
10:00-10:40	Title: Multi-physics Modeling on Soft and Smart Materials L.Y. Jiang , Western University, Canada
Keynote Session	
10:40-11:10	Title: New advancements in the production and characterization of Inconel 718 produced through Wire-Arc Directed Energy Deposition (WA-DED) process Ahmad Nourian Avval , Northeastern University, USA
11:10-11:25	Coffee Break
11:25-11:55	Title: Research Frontiers in Space Propulsion Riheng Zheng , Beihang University, China
11:55-12:25	Title: The Development of the First Italian Heat Pump Based on the Elastocaloric Effect Adriana Greco , University of Naples Federico II, Italy
Invited Session	
12:25-12:50	Title: Theoretical Results on the Stabilizing Effects of Slip on a Thin Liquid Film Coating a Heated Wall Luis A. Davalos-Orozco , National Autonomous University of Mexico, Mexico

12:50-13:15	Title: A Benchmark Suite for Stress-Guided Lightweight 3D Designs Rüdiger Westermann , Technical University of Munich, Germany
13:15-14:10	Lunch Break
14:10-14:35	Title: Influence of Fictitious Bristle Parameters in Dynamic Friction Models Matthias Schuderer , OTH Regensburg, Germany
14:35-15:00	Title: Structural Health Assessment for Aircraft Based on System Reliability and Bayesian Network Yin Zhiping , Northwestern Polytechnical University, China
15:00-15:25	Title: Peridynamic Modeling of Damage Propagation in a Composite Laminate Under Impact Loading Reza Alebrahim , Roma Tre University, Italy
15:25-15:50	Title: Foundation Models for Autonomous Vehicles Deok Jin Lee , Jeonbuk National University, South Korea
15:50-16:15	Title: The Employment of Multiple Caloric Effects for Environmental Solid-state Heat Pumps Caludia Masselli , University of Naples Federico II, Italy
16:15-16:30	Coffee Break
16:30-16:55	Title: Elastocaloric Cooling for Electronic Applications: CHECK TEMPERATURE Pasquale Cirillo , University of Naples Federico II, Italy
16:55-17:20	Title: To be confirmed Valerio Belardi , University of Rome Tor Vergata, Italy
17:20-17:45	Title: To be confirmed Massimo Viscardi , University of Naples Federico II, Italy
17:45-18:15	Posters Session
P001	Title: Preliminary Design of a Hybrid Traction/Cable Drive Transmission for Lower Limb Powered Prosthetics Jason Mitchell , Vanderbilt University, USA
P002	Title: Evaluating Failure Mechanisms and Fatigue Behavior of Ni-based Superalloy Under Thermomechanical Fatigue Testing Seung Hoon Nahm , Korea Research Institute of Standards and Science, South Korea
P003	Title: Differentiation Study of Remaining Useful Life Assessment Models for Different Bonded Composite Structures Yang Zhang , Institute of Fluid-Flow Machinery, Poland
18:15-18:30	Award Ceremony & Closing Remarks